GIS Module Exercises

This example covers creating a new Project Unit for analysis purposes and assigning plots to it so they will be available in the FFI **Query Builder** or **Reports and Analysis** functions. If you wish to work through this, you will need to have the FFI GIS module installed, and you will need to have plots with coordinates and GIS data to match. The plots and data presented here are from Wind Cave National Park.

In these exercises you will:

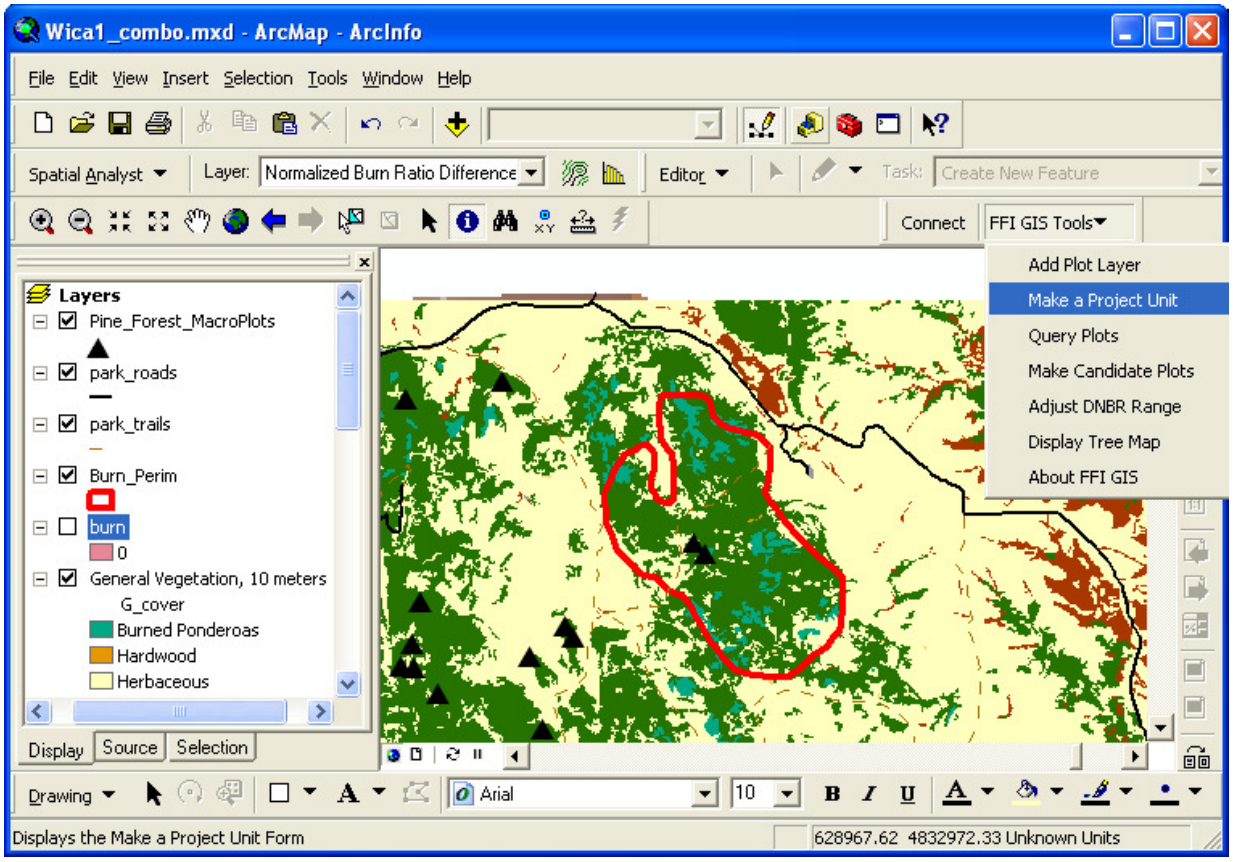
1) Create a new Project Unit
2) Select Plots in the new Project Unit
3) Analyze plots in new Project Unit

Exercise 1: Create a new Project Unit

First, create a new Project Unit raster layer for the terrain you wish to analyze. In this example, we will use burn perimeter and vegetation cover raster layers. Spatial Analyst has been used to convert a polygon burn perimeter to a raster.

1.1 Log in to the FFI database.

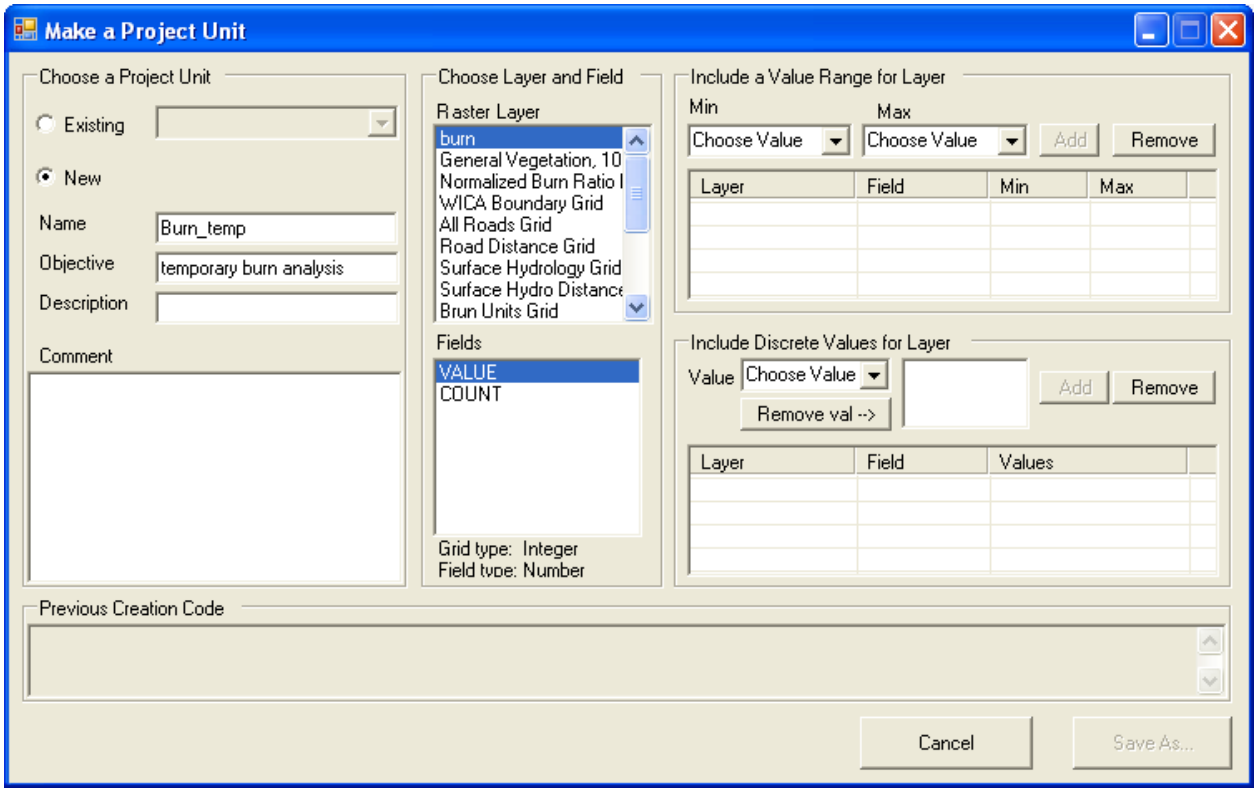
1.2 Select **FFI GIS Tools**, **Make a Project Unit**.



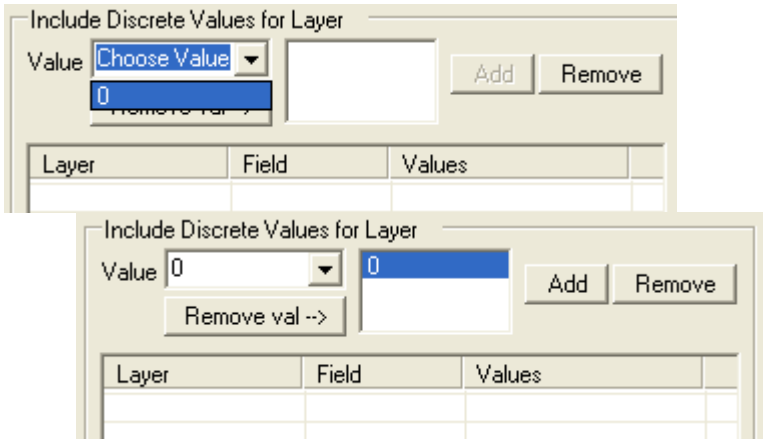
1.3 The **Make a Project Unit** dialog window opens. Select the **New** radio button under **Choose a Project Unit**.

1.4 Assign the **Name** "Burn_temp" and under **Objective**, enter "temporary burn analysis".

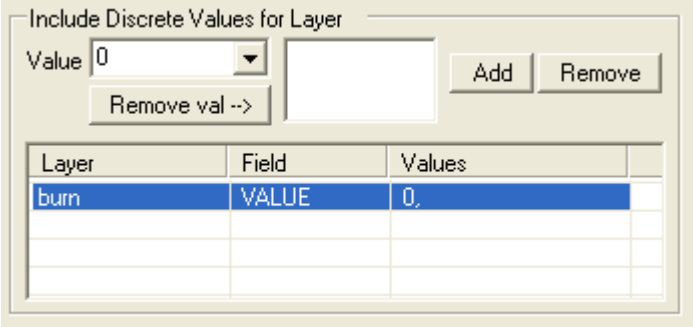
1.5 Under **Choose Layer and Field**, highlight the "burn" raster layer and the "Value" field.



1.6 Under **Include Discrete Values for Layer**, select the value for the burn (zero, in this example). Note that the value is copied to the **Add** box to the right of the drop-down, but not to the list below.

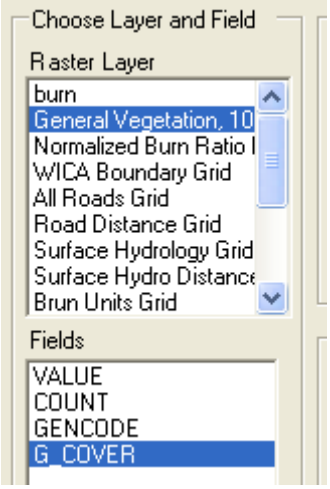


1.7 Click the **Add** button to put the value for this layer in the list of layers.

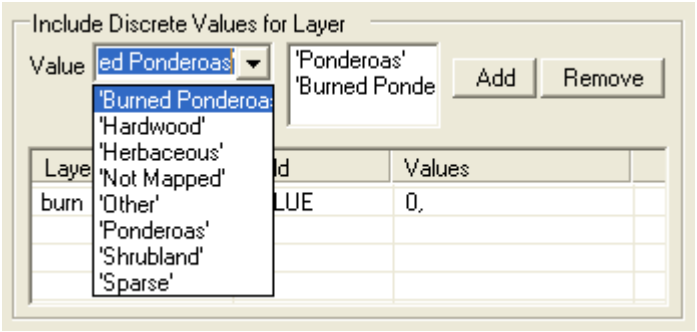


1.8 Under **Choose Layer and Field**, highlight the "General Vegetation" raster layer.

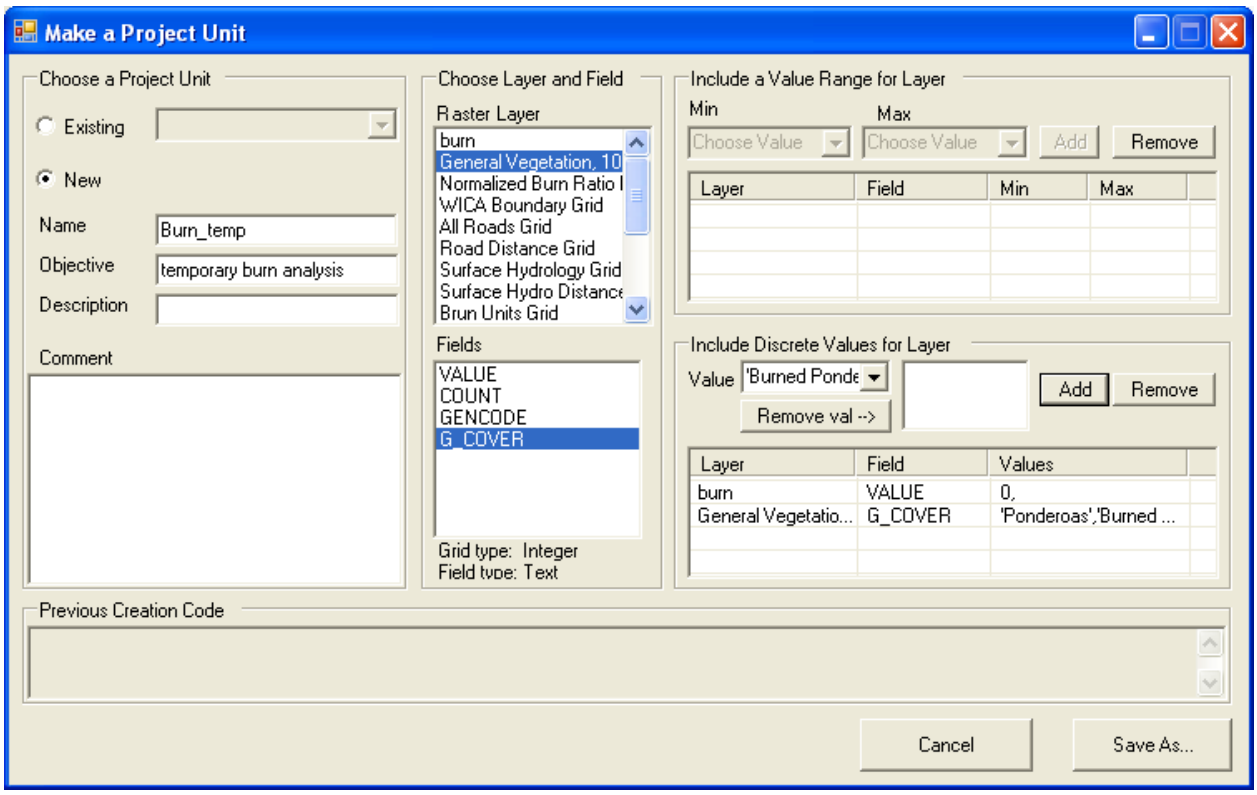
1.9 Select the "G_Cover" field. (In this example, the vegetation raster has a field for generalized vegetation.)



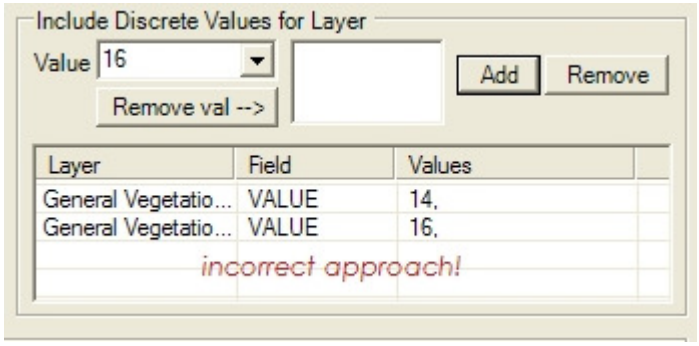
1.10 Under **Include Discrete Values for Layer**, select first the "Ponderosa", then the "Burned Ponderosa" values (note that both values will appear in the **Add** box).



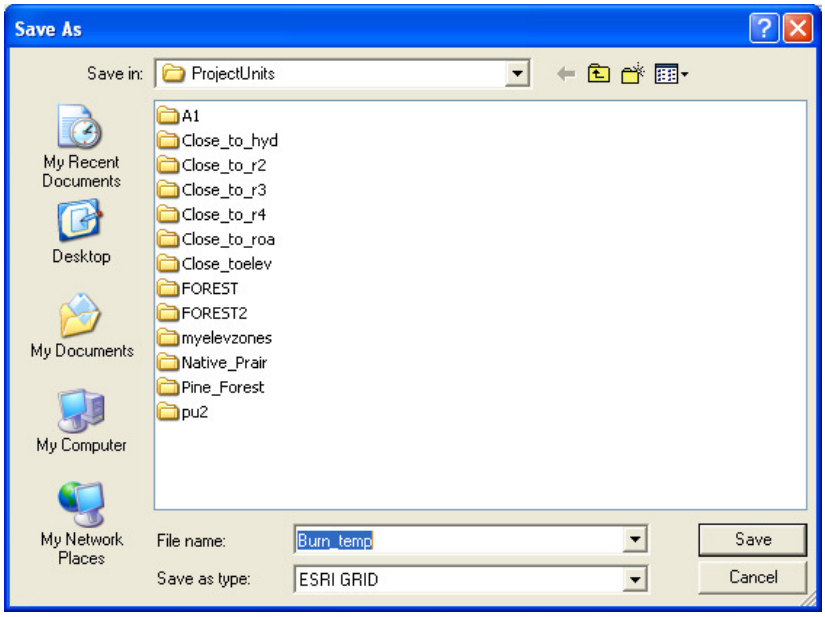
1.11 Click the **Add** button to put this layer into the list of layers.



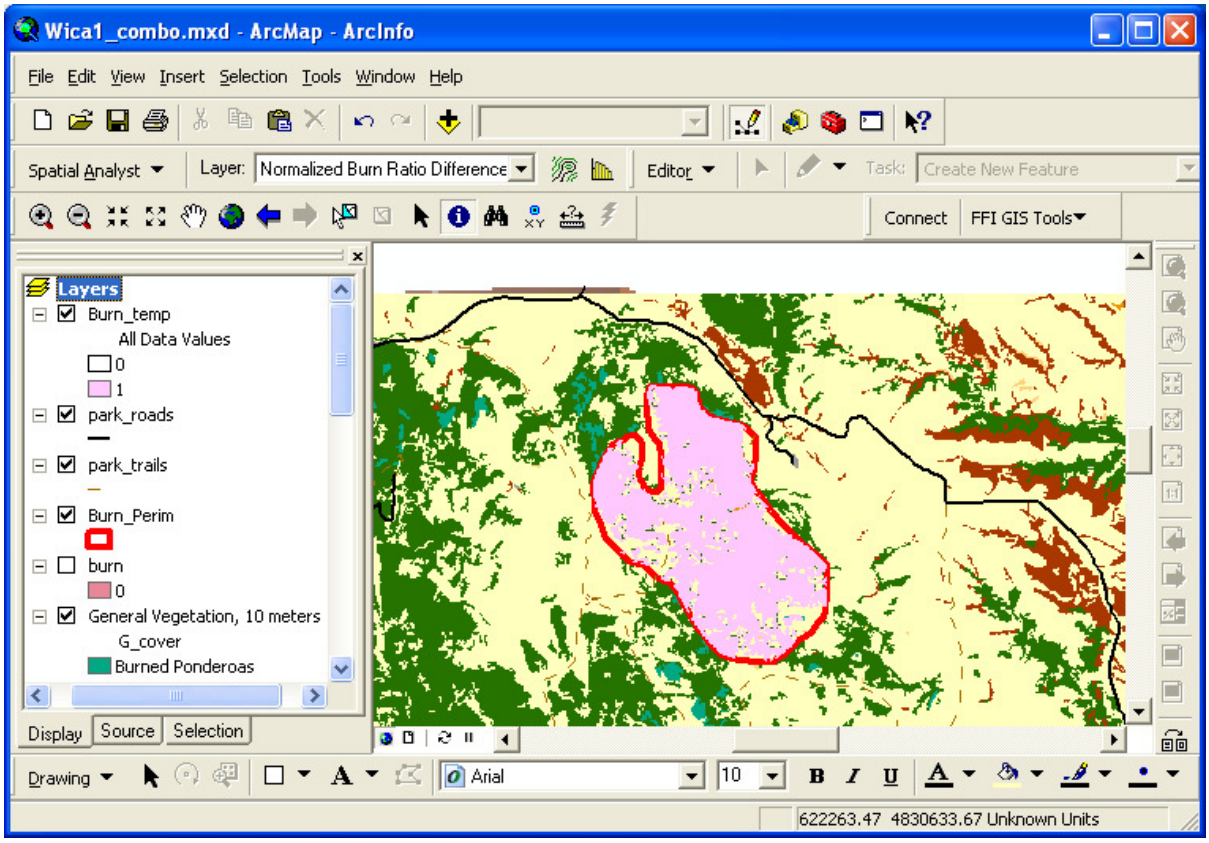
At this point, make sure that each layer appears only once in the list of layers. If the layer appears twice, an error will result:



1.12 Click the **Save As…** button. In the **Save As** dialog, choose a directory and name for your new raster layer.



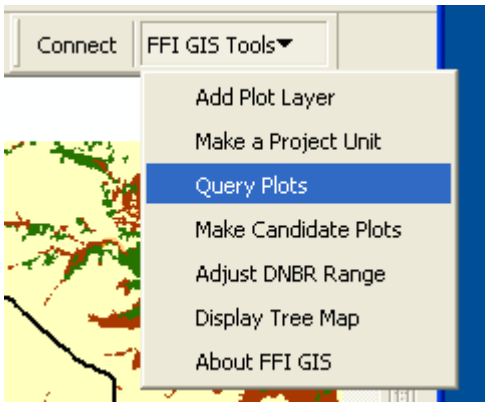
After a few moments, your new project unit raster layer will display in the map. This represents all of the “Ponderosa” and “Burned Ponderosa” areas within the burn perimeter.



Exercise 2: Select Plots in the new Project Unit

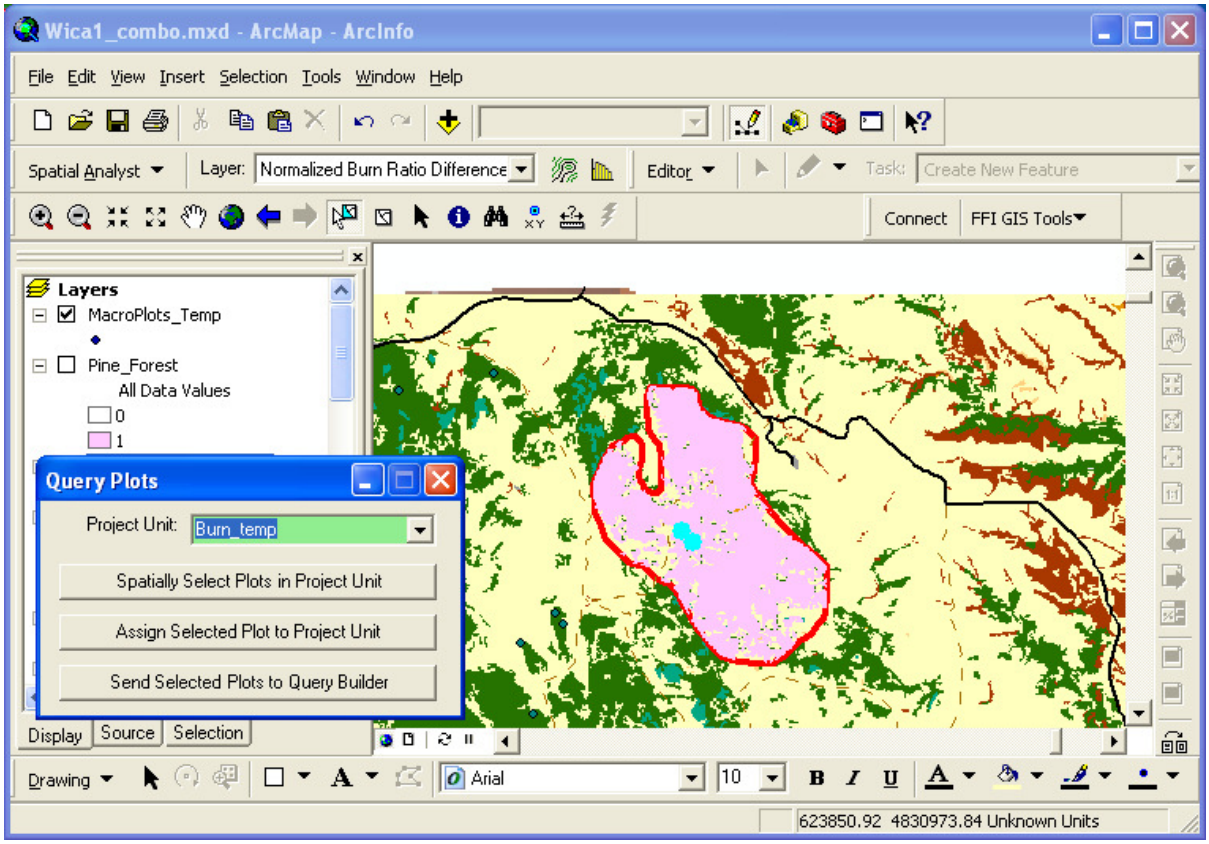
Next, we will select the plots that intersect our new Project Unit raster.

2.1 Select **FFI GIS Tools, Query Plots**.



2.2 In the **Query Plots** window, select the new “Burn_temp” Project Unit.

2.3 Click the **Spatially Select Plots in Project Unit** button. Those plots that fall with in the raster will now be selected.



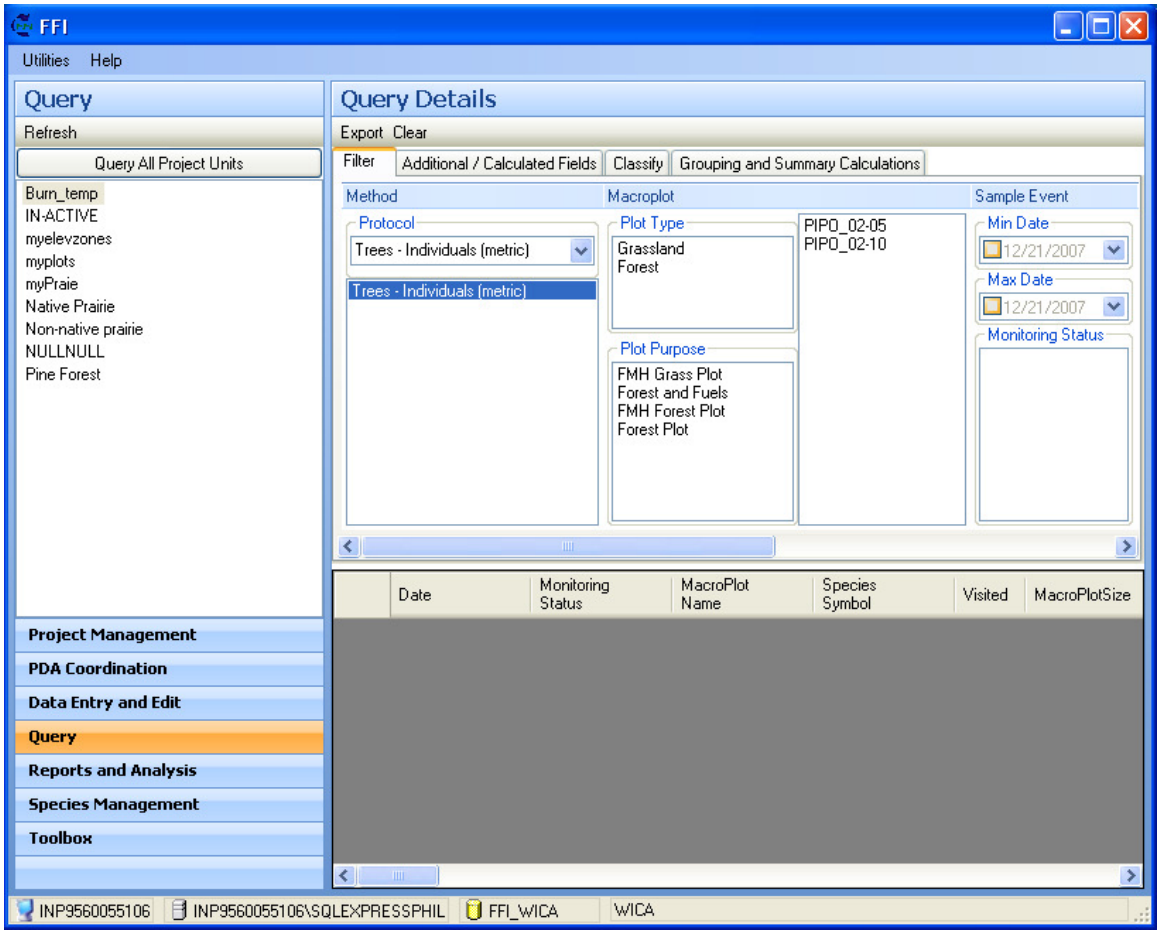
2.4 Click **Assign Selected Plots to Project Unit.**

Exercise 3: Analyze plots in new Project Unit

3.1 Start (or restart) FFI. (You will not be able to see your new Project Unit in FFI if it was already running.)

3.2 Go to the **Query Builder** or to **Reports and Analysis**.

3.3 Select the new “Burn_temp” Project Unit and note that analysis is restricted to the plots you assigned to it.



NOTE: You can delete the “Burn_temp” project unit when you are done with it.